originality on the part of the student. The work is intended to supplement the instruction in organic preparations, which has been found by the authors to "fail, to a surprising extent in the case of most students, to give a knowledge of the important characteristics of the various classes of organic compounds, and, therefore, of the fundamental principles of the science." The selection of reactions and the method of treatment are excellent, and the book will prove a very useful one. The number of reactions might, of course, be easily extended; especially is it desirable to include Liebermann's reaction for secondary amines and the general reactions for vegetable alkaloids. It would also be an advantage if the names by which some of the reactions are constantly known to chemists were given, and an occasional reference to the literature would be very useful.

W. A. NOYES.

SCIENTIFIC JOURNALS.

American Chemical Journal, July: 'A Reduction of Permanganic Acid by Manganese Peroxide:' By H. N. MORSE and C. L. REESE. The relative action of manganese peroxide and hydrogen in causing the reduction of potassium permanganate has been studied and the results compared with those obtained by Meyer and Von Recklinghausen. 'The Atomic Weight of Cadmium:' By H. N. MORSE and H. R. ARBUCKLE. The atomic weight has been redetermined and a correction introduced for the gas retained by the oxide. The mean corrected value is 112.377. 'A Table of Atomic Weights:' By T. W. RICHARDS. This table has been compiled from a comparison of the best results obtained in atomic weight work, the probable chemical accuracy of the processes being the criterion. 'Researches on the Cyclo Amides: α-Ketobenzmorpholine and α-Benzparaoxazine Derivatives:' By H. L. WHEELER and B. BARNES. 'The Action of Amines on Acylimidoesters: Acyl Amidines:' By H. L. WHEELER and P. T. WALDEN. 'On a New Form of Water Blast:' By B. B. BOLTWOOD. The author has devised a form which gives a high efficiency with a small amount of water. 'On the Periodic System and the Properties of Inorganic Compounds:' By J. LOCKE. The author discusses the Periodic System and shows that the usual arrangement, which is very satisfactory when we only consider the behavior of the elements themselves, is very unsatisfactory when we compare the properties of the compounds of these elements. 'The Action of Sulphur upon Metallic Sodium:' By J. LOCKE and A. AUSTELL. This investigation shows that the monosulphide cannot be formed by direct combination at temperatures below 220°. 'On Some Compounds of Trivalent Vanadium:' By J. LOCKE and G. H. EDWARDS. 'The Conductivity of Aqueous Solutions of Praseodymium and of Neodymium Sulphates:' By H. C. JONES and H. M. REESE. This number also contains a note on the preparation of Liquid Hydrogen, which was obtained by Professor Dewar, who also liquefied helium by introducing a tube of the gas into the liquid hydrogen.

J. ELLIOTT GILPIN.

THE *American Naturalist* for June opens with an article on the fresh-water biological stations of America, by Dr. Charles A. Kofoid. The relative advantages of marine and fresh-water stations are commented on, and a description is given of the Lake Laboratory of the Ohio State University, prepared by the late Professor D. S. Kellicott, of the Biological Station of the Indiana University by Professor Carl Eigenmann, and of the Illinois Biological Station. Professor H. C. Bumpus contributes an article on the identification of fishes artificially hatched, in which he makes an interesting application of the statistical method of representing variations. The series of papers on the wings of insects by Professor Comstock and Dr. Needham is continued, and Dr. V. Sterki writes on the classification of *Ciliate Infusoria*.

NEW BOOKS.

Plant Life considered with Special Reference to Form and Function. CHARLES R. BARNES. New York, Henry Holt & Co. 1898. Pp. x + 428.

A Brief Course in Qualitative Analysis. ERNEST A. CONGDON. New York, Henry Holt & Co. 1898. Pp. iv + 62.